All in all, this increased presence and better knowledge of the field will facilitate the correct assessment of needs and available resources, it will help us to mobilise the local populations, and to priorize our efforts. It will improve the coordination of our own work and the evaluation of its impact. Moreover, the locus of coordination thus is gradually brought to shift from far away Peshawar to where it is really relevant : in Afghanistan.

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II. THE DEVELOPMENT OF THE EPI PROGRAMME IN THE CENTRAL PROVINCES.

A. STRATEGY PLANNING

Up till the spring of 1990, the activities of the AVICEN crossborder EPI programme for rural Afghanistan were run entirely out of Peshawar.

This meant
- that for the training of all EPI staff of different levels of responsibility (vaccinators, cold chain technicians, field trainers, EPI supervisors, epidemiological surveyors, EPI project officers) recruits had to come from Afghanistan to Peshawar and stay here for several months
- the only central cold store for vaccines (with a capacity of 1,4 million doses) was located in Peshawar ;
- the field work of all vaccinators teams operational in 22 provinces of Afghanistan was being organised from Peshawar. The 'organisation' of field work here should be understood in a political, logistical as well as an epidemiological sense. Contact and assessment missions, general surveys, supervision and the evaluation of the field work, all occured in Peshawar ;
- all attempts at coordination of the activities of the different agencies involved in the crossborder EPI also occur exclusively in Peshawar.

This situation, however understandable from the history of crossborder aid work, does have drawbacks :
- supervision and quality control in the field is limited and irregular ;
- coordination in Peshawar does not involve the EPI staff in the field nor the local authorities in a given area, rendering it a fairly theoretical exercise ;
- a low cost/efficiency given the complicated logistics. Indeed, under this system all teams each time come back to Peshawar individually to get resupplied. It should be kept in mind that AVICEN does not dispose of a network of clinics. Our vaccinator teams constitute a group of up to 3 or 4 persons that move around roughly within the parameters of a "district". Small and mobile groups, working independently, following different routes and employing different logistical means to get resupplied, were a perfectly adapted strategy for the war time conditions that prevailed all over the countryside till more or less the fall of 1988. (Other advantages of the mobile strategy as such are listed in Van Brabant 1990:20-21).
However, such strategy leads to high transportation costs and a lower efficiency in operational (much time lost on travel) and epidemiological (longer interval between first and second shot) terms.

In the summer of 1989 we therefore developed a plan to improve the overall cost/efficiency of the programme (relationship between economic input and epidemiological output). The plan consisted of 4 complementary elements :
1. investment in EPI vehicles and joint logistics (for resupply, monitoring and supervision) ;
2. the implantation of EPI field centres or "regional delegations" ;
3. a revolving buffer stock of vaccines and vaccination equipment to avoid ruptures in stock ;
4. a revolving cash fund to avoid ruptures in cash flow.

For this report are relevant the points 1 and 2.

a. Rationalising logistics :
A first step towards the rationalisation of resupply was taken in the summer and fall of 1989. Attempts were made to reduce the transportation cost by putting vaccinator teams going to the same area together on a truck for as far as possible.

Besides resupply missions were organised from Peshawar, with a truck taking in all equipment and vaccines (up to more than 100.000 doses at a time) to go and resupply 6 to 8 teams in 2 or 3 adjacent provinces. Although slightly advantageous from an economic point of view, and very favourable in terms of improved efficiency of the teams (cfr. Arnould 1990), this tactic was shown to present new problems for the administration and accounting of the teams and for their debriefing and feedback. Yet it helped us to foresee problems that would arise with the establishment of regional delegations or field centres.

b. Administration in the field :
One of the needs then identified was for the presence of reliable field administrators. Since training courses in Peshawar only aimed at producing office workers for Peshawar, there was no other possibility but to develop ourselves a training course for field administrators. By the time this report is written a manual has been completed. The ultimate aim will be to develop coherent and standardised administrative procedures for the whole EPI programme in Afghanistan.

c. Developing the concept of an EPI field centre :
Initially such field centres were only conceived of as "freeze points", i.e. equipment and vaccine storage facilities with a capacity of more than 120.000 doses of vaccine. "Freezepoint" only identifying the storage function, the concept was then broadened and renamed into "EPI-field centre". This includes additional functions : it is a logistical relais and has a guesthouse for EPI staff, it contains the office of an administrator and of an EPI supervisor, in the future it may become the seat of a regional EPI coordinator or evaluation group, it has a repair workshop for cold chain equipment and will become an information transmission point (radio).

It should be kept in mind that, although AVICEN is the implementing agency, the purpose is that such field centres increasingly serve and strengthen the Afghan rural EPI, not only the foreign NGO.

Their creation is another step at rationalising logistics and thereby improving the overall cost/efficiency of the EPI programme. The idea is to resupply the field centres once or twice a year, and have vaccinator teams go to their nearest field centre for all supplies, for financial and operational reporting, for salaries etc.

In order to function correctly as a decentralised unit, very precise and coherent procedures need to be established concerning stock management, administration and finance, that can be followed by and centralised in Peshawar.

d. Developing an implementation strategy :
EPI field centres should not be set up on the basis of irrelevant criteria like the charm of a commander or the years one is already working in an area. Irrelevant, because this would be NGO-centered criteria, disregarding the needs and the structure of a future country-wide EPI programme.

In that regard a "national" implementation plan (excluding the urban centres) was conceived (cfr. Truze 1989). In a paper 4 theoretical models were considered and their respective advantages and disadvantages weighed against each other. It considered a network of EPI-field centres of a centralised kind, another one following the penetrating supply lines, a third model developing field-centes along circular belts and a fourth conceived as a mixture of the penetrating supply lines with the circular belt approach. Given that the centralised model reflects a situation in which the country is at peace and centered on Kabul and that the circular belt model would develop together with a real repatriation movement, models 1, 3 and 4 remain irrelevant for the present context. The strategy chosen therefore is that of model 2, to follow the penetrating supply lines.

Another factor to take into account is the size and total number of EPI-field centres. As stated above, an EPI field centre fullfills several functions and has a vaccine storage capacity of minimally 120.000 doses. The term "vaccine storage facility" is reserved for a centre with a smaller capacity and without administrative and supervisory functions. The term "regional delegation" is reserved for a centre with a storage capacity of at least 400.000 doses, serving 4 to 5 adjacent provinces.

The determination of the size of a field centre, and in particular its storage capacity, in practice depends on the realities of the field. In theory, 5 or 6 regional delegations could suffice to serve the whole Afghan countryside. Too great a number of small vaccine storage facilities (VSF), all supplied from Peshawar, would be uninteresting : logistics and resupply would not become much simplified and remain costly, it complicates the overall staock management, more cold chain technicians would have to be trained and supervised, will bring about more repair and maintenance problems and would require the availability of more supervisors than is presently the case.

In order to have an impact on the overall cost/efficiency of the programme, an EPI field centre needs to be "economical". When exactly it becomes economical would require a detailed study which has not yet been carried out. But we can already state that the savings on transportation, combined with the increase in efficiency, should outbalance the combination of investments (and their depreciation), running costs and losses.
This can only be the case if :
- the EPI field centre is established deep enough in Afghanistan. Indeed, a centre close to the Pakistani border does not significantly reduce the transportation costs and the working time lost on resupply. Therefore it is not worth the investment ;
- if a sufficient number of vaccinator teams can be attached to an EPI field centre.

One of the future tasks of the AVICEN health economist evaluating the crossborder EPI in economic terms, will be to analyse the relationship between these variables.

e. Choosing the location for an EPI field centre :

At least 2 aspects to consider in the choice of a precise location for an EPI-field centre are :
1. physical accessibility ;
2. socio-political acceptability ;

1. Physical location :

Criteria retained for the physical location of an EPI field centre were :
- accessible by road : accessibility by road in different seasons is an essential criterion. If there are several access routes, the dependency ratio of an EPI field centre is reduced
- along an existing supply route. In this respect, if the centre is established on a mujahedin supply route, one has to take into account what will happen to it the day the situation in Afghanistan is again normalised and governmental routes are open and clear ;
- it should not be in a spot that is likely to come under military attack.

2. Social acceptability :
This is by and large a factor correlating negatively with political (party, ethnic, tribal) pressures.
Where strong party or ethnic rivalries exist, it may be necessary to "duplicate" field centres or to consider the respective spheres of control as different catchment areas.

The concern for social acceptability also impacts on the choice of the physical location. At times there is a choice between the former government centre (e.g. the provincial or the district headquarters), a village or a bazaar. Each site is perceived differently and has its own advantages and disadvantages in terms of Afghan politics.

Whereas initially the possibility (strongly favoured by advocates of the "integrated approach" theory) to attach an EPI field centre to a medical facility (clinic/hospital) was considered advantageous (sharing of infrastructure such as buildings, water supply, generator etc.), more careful reflection has led us to think that an EPi-field centre should not necessarily be linked to a curative service centre. Indeed, the nature of an EPI field centre is very different from that of a medical centre. An EPI field centre is a place where only EPI staff needs to come to. It does not necessarily, and perhaps even preferably not, offer vaccination services. A clinic is a place where the population at large comes to. The smaller the amount of people congregating on a centre, the smaller the risk of incidents and conflicts. And more importantly : purely EPI technical staff has far less electoral importance for a commander, a party or a tribal chief, than the population at large. This reduces the instrumental value of an EPI field centre for local power politics and renders it less vulnerable to political pressuring and manipulation.

f. Flexibility in implementation
In practice the implantation of vaccine storage facilities, EPI-field centres or regional delegations has to be very flexible. Indeed, the location, the size and the priority given to any centre will depend on the need (amount of vaccinator teams in the area), the accessibility of the area (logistically and politically) and the availability of funds.
Flexibility in the size and location of any centre is made possible by the fact that each in fact is an "assemblage" of equipment and functions. Energy sources (gas and generator) and refrigerators/freezers can be added or removed. Any field centre remains intrinsically mobile : it suffices to put everything on one or more trucks to shift it partially or wholly elsewhere. This is also the best protection against them falling into disuse if the political-military situation would change and urban centres and hospitals again become the nodes of a medical service infrastructure. The equipment of any field centre can easily be shifted to a provincial headquarters or be dispersed over several hospitals offering static vaccination services.

B. IMPLEMENTATION

1. EPI-field centre Tezak.

During June and July 1990 (Fabre 1990) the nucleus of an EPI field centre was set-up in Tezak bazaar, Behsud 1 district, Wardak/Maidan province. (Both names are used. Wardak being the name of a Pushtun tribe, the Hazara prefer to speak of Maidan province.) Tezak is in the Hazara part of the province.

Tezak is a strategically located crossroads from where one can go southeast to Wardak valley, southeast to Qarabagh and Jaghori (Ghazni), north to Bamyan marcaz and further to the northern provinces (Faryab, Jowzjan, Balkh, Samangan) or west into central Hazarajat (Panjao in Bamyan, Ghor and northern Uruzgan). The bazaar is 12 hours driving from Kabul (to the east) over a dirt road.

The EPI-field centre currently consists of :
- a vaccine storage facility (VSF) with a capacity of 130.000 doses, expandable to 200.000 doses. There are now 6 Sibir and 3 RCW 65 refrigerators (vaccine storage and icepack production). They run on gas. A generator has been installed and electrical wiring fixed so that they can also use electricity as energy source. There is a stock of gas bottles. This VSF is located in a madrassa ;
- an equipment store : for portable refrigerators and cold boxes, protective canvas covers, needles and syringes, registration materials, small medical and writing equipment ;
- an AVICEN office and guesthouse : a building has been rehabilitated and an extra floor constructed.

Afghan staff is in charge of the cold chain, the stock management, the administration and the technical preparation of missions.

Since it became operational in July 1990, 13 teams, operating in Ghazni, Wardak, Ghor, Parwan, and Bamyan, have already been supplied from the field centre. Apart from the mission to install the field centre, Tezak has already been resupplied twice from Peshawar while a third resupply is on the point of leaving.

Concommitant with the creation of this physical nucleus of a field centre, its other functions have been experimented with.

2. Training

The AVICEN vaccinator training course consists of 3 parts : a theoretical part with simulation exercises in Peshawar, a practical training session in refugee camps in the Northwest Frontier Province (Pakistan) and a practical training session under real life conditions in rural Afghanistan. Normally were chosen border provinces for the last training session. This time, and for the first time, student missions have been organised deep in Afghanistan, notably in Parwan province. (number) students (ethnic origin) were divided into (number) teams and carried out their practical training in the districts of Ghorband and SurkhParsa. In a total of 46 effective days of vaccination, three student-vaccinator teams have reached 4635 women and 6456 children in 85 different villages. Second rounds are already ongoing.

Rather than bringing them back to Peshawar, a graduation ceremony was organised for the first time in Afghanistan (July 2nd 1990, Kajab-e-Behsud) in the presence of local medical personnel, local authorities and the AVICEN director.

One of AVICEN's longer term goals is to help create a health infrastructure in rural Afghanistan that will remain in place also under peace-time conditions. This determines among other things our recruitment policy which selects people with a rural origin who are less likely to move to urban centres as soon as peace is established. Along the same lines, in the future we hope to be able to conduct recruitment and training in Afghanistan to avoid having to take students out of their social environment and make them stay several months in Peshawar.

3. Operations

Under supervision of senior staff from the Operations department in Peshawar, the Tezak staff prepared the first vaccination missions of the graduated students at the field centre itself. Teams set out with full equipment and supplies for the following destinations : Parwan province (Shekh Ali and Ghorband), Bamyan province (Panjao, marcaz, Kamard districts), Wardak province (Behsud 1 and marcazeBehsud districts), Kapisa province (marcaz). The team to Panjao (Bamyan) was transported by our own EPI-vehicle. Others were put on trucks that can easily be rented in the caravanserai of Tezak.

4. Supervision

We distinguish between checking and technical supervision. "Checking" is a form of non-technical control to verify whether staff is where they are supposed to be and whether they are working or not. It also refers to the investigation of whatever case of suspected fraud. Finally checking refers to inquiries whether the AVICEN doctrine of political neutrality and non-discrimination is respected by our staff or not.
"Technical supervision" refers to the evaluation of the quality of the work of the staff (eg. injection technique, respect for vaccination schedule, maintenance of cold chain, record keeping etc.).
Till the summer of 1989 supervision was limited or absent primarily due to the lack of qualified EPI supervisors and our non-familiarity with the central provinces. Since then, out of the pool of experienced vaccinators several Afghan EPI-supervisors have been trained and a framework for supervision has been detailed. By now we have vastly improved our knowledge of, contacts in, and access to the central provinces.
Afghan EPI-supervisors visited the following teams : 2 teams in Bamyan marcaz and another in Yakaolang, the team in Shekh Ali (Parwan), a team in the Hazara part of Wardak (Behsud) and 2 others in the Pushtun part (Chak).

They were also able to supervise the work of a cold chain technician of agency X and of the vaccinators of agency Y. This is an expression of the fact that an EPI programme cannot be an agency-based programme. AVICEN's purpose is to train a "corps" of Afghan EPI-staff who work across agency lines.

5. Offices

Apart from the office in Tezak, two more AVICEN offices have been opened in the central provinces, one in Bamyan marcaz (provincial centre) and one in EshPushta (where Bamyan, Baghlan and Samangan province meet). The latter point will become a transit route to the northern provinces one the road over the mountain, now under construction, will be completed. In both places buildings were leased and rehabilitated. Staff has been recruited locally to serve as checkers. They will also be contact persons and AVICEN representatives in their area.

The Bamyan office will be upgraded to an EPI-field centre. Besides having offices for the administrator and the checkers, its vaccine storage facility will have a capacity that can vary with the seasons : a larger capacity in winter when Tezak can no longer be reached by vaccinator teams from the northern provinces, who then will get resupplied from Bamyan, and a smaller capacity in summer.

6. Contact and assessment missions

Apart from establishing the field centre and the AVICEN offices, staff has been travelling extensively in northern Hazarajat. Routes, roads, mountain passes, river crossings and airstrips were explored, logistical resources identified and transportation prices collected. The facilities and services available in different caravanserai and bazaars are better known. The condition of former clinic and hospital buildings has been assessed. Natural resources that could possibly be used in the cold chain (the empty coal mines in EshPushta, the waters of the Band-i-Amir) are being explored and evaluated. Some local staff that had worked with foreign agencies till these abandoned their projects were evaluated and some were hired.

Extensive talks have also been held with different types of local authorities : village elders,

commanders, party representatives, the Shura Islami who assembles the Shia and the Sunni parties of Bamyan marcaz, and the Hezb-e-Wahdat who assembles the Shia parties of Hazarajat. Protocols have been signed concerning security, free access and transit for people of whatever party affiliation, the provision of a building, the use of radio communication participation in the establishment of priorities, help with the checking of the staff and with the enforcement of decisions, a control against abuses (eg. the sale of vaccines) and a commitment to a unified approach.

7. Coordination and evaluation

We have been able to establish contact with EPI staff members of some other agencies. One of these agencies has difficulties in resupplying its vaccinator teams. It will be proposed that AVICEN organise this, as a first step towards an overall EPI logistics rather than an NGO-logistics.
Upon advice of AVICEN staff the local authorities also stopped a trader from selling diluent as vaccine in the bazaar of Bamyan.
Contact with the UN has also been established in the field. The UN office in Bamyan marcaz was visited. The first UN SMU (Salam Mobile Unit) to Bamyan included a UNICEF officer. She was thoroughly briefed and our own findings constitute a complement and a follow-up to her report. A second UN SMU later on was met by AVICEN staff in Bamyan. They then accompanied the SMU to Baghlan and Parwan.

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HAZARAJAT

THE DEVELOPMENT OF THE EPI PROGRAMME IN THE CENTRAL PROVINCES

AFGHANISTAN VACCINATION AND IMMUNISATION CENTRE

(AVICEN)

Peshawar, September 1990